

Section 310

1 Payment will be made under:

Pay Item

___" Drainage Pipe

___" Drainage Pipe Elbows

Pay Unit

Linear Foot

Each

SECTION 310 PIPE CULVERTS

310-1 DESCRIPTION

5 Furnish and install drainage pipe at locations and size called for in the contract documents.
6 The work includes construction of joints and connections to other pipes, endwalls and
7 drainage structures.

310-2 MATERIALS

9 Refer to Division 10.

Item

Concrete Pipe Tees and Elbows

Corrugated Aluminum Alloy Pipe Culvert

Corrugated Aluminum Alloy Pipe Tees and Elbows

Corrugated Steel Culvert Pipe and Pipe Arch

Corrugated Steel Eccentric Reducers

Corrugated Steel Pipe Tees and Elbows

HDPE Smooth Lined Corrugated Plastic Pipe

Precast Concrete Pipe End Sections

Prefabricated Corrugated Steel Pipe End Sections

PVC Pipe

Reinforced Concrete Pipe Culvert

Section

1032-6(D)

1032-2(A)

1032-2(B)

1032-3(A)

1032-3(D)

1032-3(C)

1032-7

1032-6(C)

1032-3(B)

1032-8

1032-6(B)

10 Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section
11 that meet the Department's Brand Certification program requirements for metal pipe culverts
12 and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe
13 culvert. The pre-approved list is available on the Department's website.

14 Do not use plain galvanized or aluminized corrugated steel pipe in the following counties:

15 Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus,
16 Craven, Currituck, Dare, Gates, Hertford, Hyde, Jones, Martin, New Hanover,
17 Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrell and Washington.

310-3 PIPE INSTALLATION

19 Install pipe, pipe tees and elbows according to Section 300.

310-4 SIDE DRAIN PIPE

21 Define "side drain pipe" as storm drain pipe running parallel to the roadway to include pipe in
22 medians, outside ditches, driveways and under shoulder berm gutter along outside shoulders
23 greater than 4 ft wide.

24 Where shown in the plans, side drain pipe may be Class II reinforced concrete pipe,
25 aluminized corrugated steel pipe, corrugated aluminum alloy pipe, HDPE pipe or PVC pipe.
26 Use of corrugated steel pipe is restricted in the counties listed in Article 310-2. Install side
27 drain pipe in accordance to Section 300. Cover for side drain pipe shall be at least one foot.

310-5 PIPE END SECTIONS

Choose which material to use for the required end sections. Both corrugated steel and concrete pipe end sections will work on concrete pipe, corrugated steel pipe and HDPE smooth lined corrugated plastic pipe.

310-6 MEASUREMENT AND PAYMENT

Pipe will be measured and paid as the actual number of linear feet of pipe that has been incorporated into the completed and accepted work. Measurement of pipe will be made by counting the number of joints used and multiplying by the length of the joint to obtain the number of linear feet of pipe installed and accepted. Measurements of partial joints will be made along the longest length of the partial joint to the nearest 0.1 ft. Select bedding and backfill material will be included in the cost of the installed pipe.

Pipe End Sections, Tees, Elbows and Eccentric Reducers will be measured and paid as the actual number of each of these items incorporated into the completed and accepted work.

Payment will be made under:

Pay Item**Pay Unit**

___" R.C. Pipe Culverts, Class ___	Linear Foot
___" x ___" x ___" R.C. Pipe Tees, Class ___	Each
___" R.C. Pipe Elbows, Class ___	Each
___" C.A.A. Pipe Culvert, ___" Thick	Linear Foot
___" x ___" x ___" C.A.A. Pipe Tees, ___" Thick	Each
___" C.A.A. Pipe Elbows, ___" Thick	Each
___" C.S. Pipe Culverts, ___" Thick	Linear Foot
___" x ___" C.S. Pipe Arch Culverts, ___" Thick	Linear Foot
___" x ___" x ___" C.S. Pipe Tees, ___" Thick	Each
___" C.S. Pipe Elbows, ___" Thick	Each
___" x ___" C.S. Eccentric Reducers, ___" Thick	Each
___" HDPE Pipe Culverts	Linear Foot
___" PVC Pipe Culverts	Linear Foot
___" Side Drain Pipe	Linear Foot
___" Side Drain Pipe Elbows	Each
___" Pipe End Section	Each

SECTION 330 WELDED STEEL PIPE

330-1 DESCRIPTION

This work shall consist of furnishing and installing welded steel pipe by trenchless methods as shown in the contract and as directed.

330-2 MATERIALS

Refer to Division 10.

Item**Section**

Welded Steel Pipe	1032-5
-------------------	--------

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website.